Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-6. (canceled)

7. (currently amended) An appliance for gasification of carbon-containing, ash-free fuel, residual and waste materials using an oxygen-containing oxidizing agent at temperatures above 850°C and at pressures between atmospheric pressure and 80 bar, comprising a reaction chamber designed as an entrained-flow reactor having a contour delimited by a cooled reactor wall and having an inlet opening and an outlet opening, the cooled reactor wall having the following structure from the outside inward:

a pressure shell arranged and dimensioned for absorbing the pressure difference between the reactor chamber and the ambient pressure outside of the reactor wall;

a water-cooled cooling gap;

a cooling wall arranged inside of the pressure shell, the water-cooled cooling gap being defined ~~between~~ by the pressure shell and the cooling wall, said cooling wall comprising a metal wall with a ceramic protection layer of ceramic mass having high thermal conductivity arranged on a side of the cooling wall facing away from the cooling gap, wherein said metal wall includes pins penetrating into said protection layer for mechanically holding said metal wall onto said protection layer; and

a ceramic refractory lining on an internal surface of the cooling wall facing the reaction chamber such that said ceramic protection layer is arranged between said metal wall and said ceramic refractory lining, the cooling gap between the pressure shell and the cooling wall being operable, with a filling of pressurized water, such that pressure in the cooling gap is higher than pressure in the gasification chamber.

8. (canceled)

9. (previously presented) An appliance as defined in claim 7, wherein the metal wall of the cooling wall comprises half-tubes which are welded together in a gastight manner, are pinned and are coated with a thin layer of ceramic mass with a high thermal conductivity, the half-tubes being arranged on a side of the cooling wall facing the cooling gap.

10. (canceled)

11. (previously presented) An appliance as defined in claim 9, wherein the thin layer of ceramic mass is a flame-sprayed layer on the cooling wall.

12. (canceled)

13. (previously presented) An appliance as defined in claim 7, wherein the cooling wall has geometric shapes.

14. (canceled)

15. (previously presented) An appliance as defined in claim 7, wherein the metal wall of the cooling wall is of undulating form.

16. (canceled)

17. (previously presented) An appliance as defined in claim 7, wherein the pressure shell is connected to the cooling wall at the input opening and the outlet opening, wherein the protective layer facilitates cooling of the refractory lining.

18. (previously presented) An appliance as defined in claim 15, wherein the undulating form of the metal wall section is one of trapezium-shaped, triangular-shaped, and rectangular-shaped.